

LUST RISC PROCESS

INVESTIGATION GOALS

- Evaluate potential receptors
- Characterize contamination
- Define extent of contamination
- Explore closure options

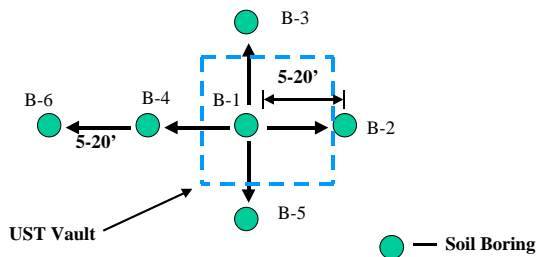
CHARACTERIZATION - SOIL

- Default (Leaking USTs)
 - Petroleum (User Guide App. 4.2)
 - LUST (User Guide Chapter 3.5.4)
- Non-default - **EVERYTHING ELSE!**

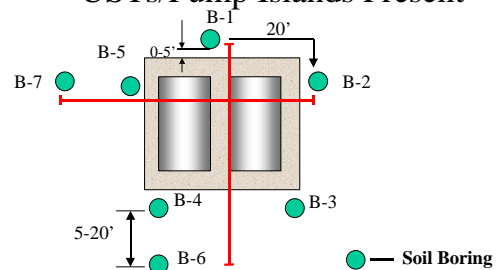
Default Soil Characterization

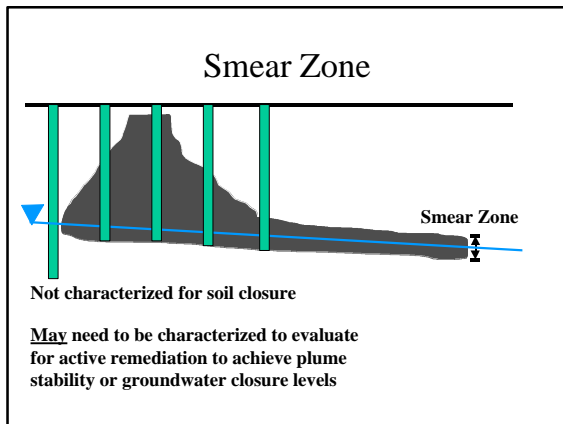
- Subsurface soil only
- Combines both screening and nature/extent
- Step out approach
 - Defines source size
 - Calculate average source concentration (PEC)
- Refine Conceptual Site Model (CSM)
 - Evaluate potential receptors
- Sampling strategies for VOCs/SVOCs

Step-Out Approach - USTs/Pump Islands Removed



Step-Out Approach - USTs/Pump Islands Present



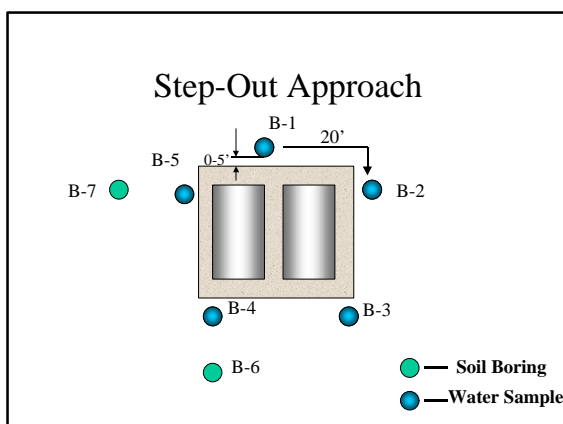
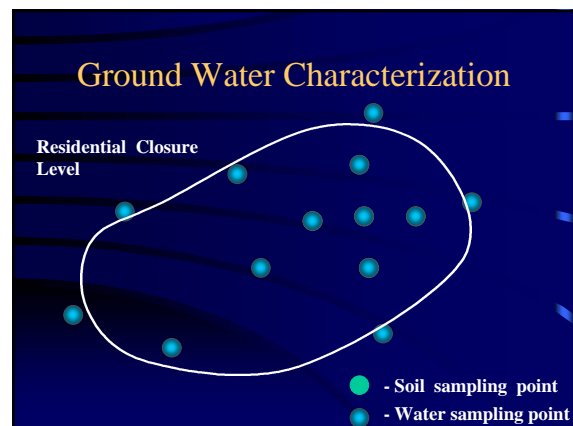


Ground Water Screening

- Usually performed while characterizing subsurface soil
- Screening skipped if ground water known to be contaminated - straight to define extent
- Sampling through push probes acceptable for screening and defining extent
- Any detection during screening requires nature & extent determination
- LUST - Ground water screening waiver

Ground Water Extent

- Define to residential closure levels
- Evaluate potential receptors when extent defined
- Refine conceptual site model
- Evaluate closure options



Closure

- Default
 - Subsurface soil (Migration to ground water pathway)
 - Surface soil (Direct contact pathway)
 - Ground water
- Non-default ?
- Additivity considerations

Default Soil Closure

- Use all soil results that exceed residential closure levels
- Use at maximum 4 levels that are less than residential closure levels
- For non-detects use 1/2 of detection limit
- Take average of above results and add one standard deviation - Result is PEC

Continued

Default Soil Closure

- PEC is compared to default closure level
- If PEC less than residential soil closure levels, then straight to closure (additivity consideration)
- If PEC is greater than than closure levels, than
 - closure for industrial levels (Notice required)
 - remediate to residential or industrial levels
 - non-default closure

Ground Water Closure

- 2-Year monitoring for closure without institutional controls (residential)
- 2-year monitoring for closure to industrial levels (requires notice)
- 7-year plume stability closure (requires notice)
- 3 to 7-year petroleum attenuation modeling closure (requires notice)

LUST Investigation Report

- Follow USER Guide Investigation Report format (Appendix 1)
 - Workplan portion **is** applicable for some LUST **non-default** options
 - Exceptions would include relatively simple non-defaults
 - Examples site specific data for use in migration to ground water closure levels and 1/4-acre source size

Continued

LUST Investigation Report

- Quality Assurance Project Plan (QAPPs) are to be used in some **non-default** options
- LUST Investigation Reports should be very clear on use of non-default procedures (Summarization in the Executive Summary)

LUST Corrective Action Plans

- CAPs should follow remediation plan guidance in USER Guide Appendix 1
- CAPs can be fairly simple for some sites
 - Screen out
 - closure with institutional controls (without active remedial effort)
- CAPs that propose active remediation

Continued

LUST Corrective Action Plans

- Plume stability closures
 - CAPs can be approved without completion of the initial 8 quarters needed to begin Mann/Kendall tests
 - Plume stability failure (Remedial plan)
- **LUST CAPs should be very clear on use of non-default procedures (Summarization in the Executive Summary)**

CAP Approval

- CAP approval for closure with institutional controls will be given once LUST Section receives proof that the controls are in place
- If CAP is submitted without proof of institutional controls, LUST Section will provide a remedy approval letter signifying that the CAP will be approved after institutional controls are in place.

Closure

- Closure document is still No Further Action (NFA) Letter
- For closure with institutional controls, the NFA letter will provide details on site history, conditions on closure and restrictions
- Closures with institutional controls can be revised based on new closure sampling